

Remarks

Five claims have been amended. Corrections were made to the description, and four dependent claims have been added to reflect the pen and ink corrections inserted in the claims by the inventors when signing the declaration. Seven claims have been cancelled. One allowed claim was amended to reflect pen and ink changes made by the inventors at the time the declaration was signed by the inventors. The Commissioner is hereby authorized to charge Deposit Account No. 01-0528 for the payment of any filing fees under 37 CFR §1.17 for the presentation of extra claims and charge any patent application processing fees under 37 CFR § 1.17. Any overpayment should be credited to the same deposit account. All of the issues raised by the Examiner have been addressed by the amendments to the claims and the remarks which follow.

The Applicant gratefully acknowledges the allowance of claims 20, 21 and 30 through 40. Dependent claims 2 through 19, and 23 through 29 were objected to for depending on rejected claims by might be allowable if made self-contained; they have been so amended. Claim 1, as amended now includes the requirements of dependent Claim 2. Claim 22 has been amended to include the process details of Claim 28. Claims 2 and 28 have been cancelled.

Claim 1 was rejected under 35 U.S.C Section 102(b) as being anticipated by Alkhalifah, et al. Claim 22 was rejected over a Schlumberger EP patent published December 28, 1998 to Hornby.

Rejection under § 102(b) is appropriate only where a single prior art publication discloses every element of the claim under consideration¹. Further, the burden is on the Examiner to establish at least a *prima facie* case of anticipation².

¹ "Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim." (emphasis added); see *W.L. Gore & Associates v. Garlock, Inc.*, 220 USPQ 303, 313 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984) and *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 221 USPQ 481, 485 (Fed. Cir. 1984).

The Federal Circuit has said: Invalidity for anticipation requires that all of the elements and limitations of the claim are found within a single prior art reference. . . . There must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention (emphasis added). *Scripps Clinic & Research Foundation v. Genentech Inc.*, 18 USPQ 2d 1001, 1010 (Fed. Cir. 1991).

A prior art reference anticipates a claim [under section 102] only if the reference discloses, either expressly or inherently, every limitation of the claim. " . . . [A]bsence from the reference of any claimed element negates anticipation." *Row v. Dror*, 42 USPQ 2d 1550, 1553 (Fed. Cir. 1997) (quoting *Kloster Speedsteel AB v. Crucible, Inc.*, 230 USPQ 81, 84 (Fed. Cir. 1986).

² The Federal Circuit said: We think the precise language of 35 U.S.C. 102 that "a person shall be entitled to a patent unless," concerning novelty and unobviousness, clearly places a burden of proof on the Patent Office which requires it to produce the factual basis for its rejection of an application under sections 102 and 103. *In re Warner*, 154 USPQ 173, 177 (C.C.P.A. 1967), *cert. denied*, 389 U.S. 1057 (1968).

The Alkhalifah publication is not pertinent art in that it addresses the determination of anisotropic parameters by looking at events with different dips in a seismic section recorded at the surface and not within the borehole. The patent to Hornby is not pertinent prior art in that he addresses the subject of isotropic imaging from a borehole.

- 5 It is respectfully submitted that the Examiner has not provided a proper factual basis for the instant rejection. As is pointed out *supra*, the burden is on the Examiner to demonstrate anticipation by specifying where each element of the invention-as-claimed may be found in the allegedly-anticipating publication.

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Other Citations

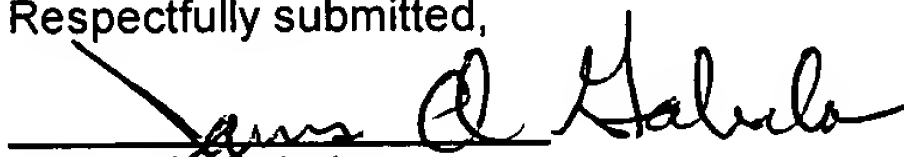
All of the art cited by the Examiner has been reviewed. None are believed to affect the patentability of the claims, whether those patents and publications are taken individually or in combination.

- 15 Enclosed with this paper is a PTO-1441 form listing all the art of record in the related PCT application and any other art discovered during the prosecution of related subject matter.

- 20 The Examiner is respectfully requested to consider the amended claims, and the arguments presented. It is believed that upon such consideration the Examiner will find that all the claims are now in the condition for allowance. In the event that further discussion will advance the prosecution of the application, the Examiner is earnestly solicited to telephone the undersigned at the telephone number indicated below.

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Respectfully submitted,


James A. Gabala
Attorney for the Applicant
Registration Number 29,537
(630) 821-2463

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- 30 Enclosures: PTO Form 1449 and listed documents